

**AMENDMENTS TO THE CLAIMS**

1-66. (Canceled)

67. (Currently Amended) A signal transmission system comprising:

a first transmission member having a first length, said first transmission member including a transmission medium;

a second transmission member having a second length, said second transmission member including said transmission medium;

a signal source ~~generator~~ having first and second signal outputs coupled to said first and second transmission members respectively;

a termination circuit connected to at least one of said first transmission member and said second transmission member; and

an impedance adjusting component coupled to said second transmission member and adapted to affect, by said coupling thereto, a signal propagation factor of said second transmission member, whereby a relationship may be established between respective transmission times through said first and second transmission members of first and second signals received at said first and second transmission members from said respective first and second signal source ~~generator~~ outputs.

68. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises:

an electrical inductor.

69. (Previously Presented) A signal transmission system as defined in claim 68 wherein said electrical inductor comprises a spiral inductor.

70. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises:

a material having a magnetic permeability, said material adapted to be incorporated into said second transmission member.

71. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises:

an electrical capacitor.

72. (Previously Presented) A signal transmission system as defined in claim 67 wherein said relationship established between respective transmission times comprises equalization of said respective transmission times.

73. (Previously Presented) A signal transmission system as defined in claim 67 wherein said first length is different from said second length and said respective transmission times through said respective first and second transmission members are equal.

74. (Previously Presented) A signal transmission system as defined in claim 67 wherein said transmission medium comprises an electrical transmission medium.

75. (Previously Presented) A signal transmission system as defined in claim 74 wherein said electrical transmission medium comprises a first conductor, a second conductor, and a dielectric material disposed between said first conductor and said second conductor.

76. (Previously Presented) A signal transmission system as defined in claim 75 wherein said electrical transmission medium comprises a first conductor;

a second conductor; and

an evacuated region disposed between said first conductor and said second conductor.

77. (Previously Presented) A signal transmission system as defined in claim 67 wherein said electrical transmission medium comprises first and second conductors disposed in a coaxial relationship to one another and a dielectric medium disposed between said first and second conductors.

78. (Previously Presented) A signal transmission system as defined in claim 67 wherein said transmission medium comprises an optical transmission medium.

79. (Previously Presented) A signal transmission system as defined in claim 67 wherein said impedance adjusting component comprises a plurality of capacitors coupled to said second transmission member at a respective plurality of coupling points.

80. (Previously Presented) A signal transmission system as defined in claim 67 wherein said first and second signals comprise first and second digital signals.

81. (Previously Presented) A signal transmission system as defined in claim 67 further comprising:

first and second signal receivers coupled to said first and second transmission members at respective first and second signal inputs.

82. (Previously Presented) A signal transmission system as defined in claim 81 wherein said first input has an input impedance substantially equal to a characteristic impedance of said first transmission member and said second input has an input impedance substantially equal to a characteristic impedance of said second transmission member.

83. (Previously Presented) A signal transmission system as defined in claim 82 wherein said first signal receiver comprises a pseudo differential amplifier.

84. (Previously Presented) A signal transmission system as defined in claim 83 wherein said pseudo differential amplifier comprises a current sense amplifier and wherein said first signal comprises a current signal.

85. (Previously Presented) A signal transmission system as defined in claim 84 wherein said current sense amplifier comprises a current mirror circuit.

86. (Previously Presented) A signal transmission system as defined in claim 81 wherein said first receiver comprises a first input adapted to be coupled to said first transmission member and a second input adapted to be coupled to a reference signal source.

87. (Currently Amended) A signal transmission system comprising:

a first transmission member having a first length, said first transmission member including a transmission medium;

a second transmission member having a second length, said second transmission member including said transmission medium;

a signal receiver having first and second signal inputs coupled to said first and second transmission members respectively;

first and second signal ~~sources~~ ~~generators~~ coupled to said first and second transmission members respectively;

a termination circuit connected to at least one of said first transmission member and said second transmission member for terminating at least one of said first transmission member and said second transmission member in a characteristic

impedance of at least one of said first transmission member and said second transmission member; and

an impedance adjusting component coupled to said second transmission member and adapted to affect, by said coupling thereto, a signal propagation factor of said second transmission member, whereby a relationship may be established between respective transmission times through said first and second transmission members of first and second signals received at said first and inputs from said first and second signal sources ~~generators~~ respectively.

88. (Currently Amended) A signal transmission system comprising:

a signal source ~~generator~~ having first and second signal outputs;

a first transmission member coupled to said first output, said first transmission member having a first length, said first transmission member including a first transmission medium having a first characteristic impedance;

a second transmission member coupled to said second output, said second transmission member having a second length, said second transmission member including a second transmission medium having a second characteristic impedance, whereby a relationship may be established between respective transmission times through said first and second transmission members of first and second signals received at said first and second transmission members from said respective first and second signal source ~~generator~~ outputs; and

a termination circuit connected to at least one of said first transmission member and said second transmission member for terminating at least one of said first transmission member and said second transmission member.

89. (Previously Presented) A signal transmission system as defined in claim 88 wherein said first characteristic impedance depends on a magnetic permeability of a material of said first transmission medium.

90. (Currently Amended) A communication circuit comprising:

a signal transmitter;

first and second transmission medium ~~media~~ coupled to said signal transmitter;

first and second receiving circuits coupled to said first and second transmission media respectively;

means for equalizing an input impedance of said first receiving circuit and a first characteristic impedance of said first transmission medium;

means for equalizing an input impedance of said second receiving circuit and a second characteristic impedance of said second transmission medium;

means for terminating said first characteristic impedance of said first transmission medium and said second characteristic impedance of said second transmission medium; and

means for differentiating said first characteristic impedance from said second characteristic impedance.

91. (Previously Presented) A communication circuit as defined in claim 90 wherein said first and second transmission media are disposed over a common integrated circuit substrate.

92. (Currently Amended) A method of synchronizing first and second operations of respective first and second circuits comprising:

receiving a first signal transition at said first circuit through a first transmission member, said first transmission member having a first signal propagation factor and a first geometric length, said first signal propagation factor related to a first characteristic impedance of said first transmission member;

receiving a second signal transition at said second circuit through a second transmission member, said second transmission member having a second signal propagation factor and a second geometric length, said second signal propagation factor related to a second characteristic impedance of said second transition member, said second geometric length different from said first genetic length;

terminating said first characteristic impedance of said first transmission member and said second characteristic impedance of said second transmission member; and

receiving said first and second signal transitions at said first and second transmission members synchronously.

93. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 92 wherein said receiving said first and second signal transitions at said first and second transmission members synchronously comprises receiving said first and second signal transitions at said first and second transmission members substantially simultaneously.

94. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 92 wherein said second characteristic impedance depends on an impedance of at least one impedance modifying component coupled to said second transmission member.

95. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 94 wherein said impedance modifying component comprises a spiral inductor.

96. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 94 wherein said impedance modifying component comprises a capacitor.

97. (Previously Presented) A method of synchronizing first and second operations of respective first and second circuits as defined in claim 92 wherein said second characteristic impedance depends on a magnetic permeability of a material incorporated into said second transmission member.

98. (New) The signal transmission system of claim 67, wherein said termination circuit terminates at least a first characteristic impedance of said first transmission member and said second characteristic impedance of said second transmission member.